Amendments To The Claims:

Please amend the claims as shown. Applicant reserves the right to pursue any cancelled claims at a later date.

1.-11. (canceled)

12. (new) A method for determining a connection path and a wavelength channel that is unoccupied on optical transmission links of the connection path within a transparent optical network system, comprising:

generating a connection cost for each connection path available for connection setup and the associated wavelength channel;

selecting the connection path with the associated wavelength channel having the minimum connection cost value;

determining for each wavelength channel of the optical transmission link, a link weighting that is a function of the characteristics of the optical transmission link and the respective wavelength channel; and

generating the connection cost value by evaluating at least one link weighting.

13. (new) The method according to claim 12, wherein a network-wide channel weighting is assigned to each wavelength channel.

14. (new) The method according to claim 13, wherein the network-wide channel weighting is determined via a channel weighting function.

15. (new) The method according to claim 12, wherein the transparent optical transmission system is split into a plurality of virtual optical transmission sub-systems, each subs-system having a single optical wavelength channel with the determined link weightings assigned to the transmission links available in the sub-system and the sub-system is evaluated to determine the connection path having the minimum connection cost value and the associated wavelength channel.

16. (new) The method according to claim 14, wherein the link weighting is determined via the following mathematical formula:

$d_{i,r} = f(i) * d_r$

where

i = wavelength channel number

r = transmission link number

f(i) = channel weighting function

d_r = position parameter.

17. (new) The method according to claim 15, wherein the link weighting determination is achieved via the following mathematical formula:

$d_{i,r} = f(i) * d_r$

where

i = wavelength channel number

r = transmission link number

f(i) = channel weighting function

d_r = position parameter.

18. (new) The method according to claim 14, wherein the channel weighting function is a linear function that is dependent on the respective wavelength channel.

19. (new) The method according to claim 18, wherein the channel weighting function has the mathematical form:

$f(i) = a + b * i$

where

a = a first parameter

b = a second parameter

i = wavelength channel number.

20. (new) The method according to claim 14,

wherein a current degree of usage of each optical wavelength channel within the transparent optical transmission system is determined or estimated, and

wherein an occupancy status of the wavelength channels occupied by further connections is evaluated via the channel weighting function and the current degree of usage.

21. (new) The method according to claim 20, wherein the channel weighting function is dependent on the degree of usage of the respective wavelength channel with the mathematical form:

$f(i) = g(A_{i,occupied}/A_{i,overall})$

where

$g(\ldots)$ = any function

$A_{i,occupied}$ = number of transmission links on which the wavelength channel i is occupied.

$A_{i,overall}$ = number of all transmission links on which the wavelength channel i is physically available.

22. (new) The method according to claim 16, wherein the length of the transmission link or the delay caused by the transmission link are considered when determining the position parameter derived from the respective optical transmission link.

23. (new) The method according to claim 12, wherein each link weighting in a connection path are added to generate the connection cost value.

Amendments To the Abstract:

In the English translation document, please add the section header and paragraph at page 27, as follows:

--ABSTRACT

A method for determining a link path and an unoccupied wavelength channel on the optical transmission links of said link path, for setting up a connection by means of at least one first and second network nodes within a transparent optical transmission system is provided. According to one embodiment of the method, a respective link weighting is determined for the wavelength channels of an optical transmission link, said weighting depending on the optical transmission link and on the considered wavelength channel. A connection cost value is also generated for each link path, which is available for the connection setup, and for the corresponding wavelength channel by evaluation of the at lest one link weighting and, for the connection setup, the link path with the corresponding wavelength channel, which has the minimum connection cost value, is selected.--